Considerations for Holding a Fall Turkey Season in South Carolina

Background

Since the advent of modern fish and wildlife management, fall turkey hunting has never been allowed on a statewide basis in South Carolina. However, a 6-day either sex fall turkey season was scheduled in the Central and Western Piedmont from 1981 though 1990. Dates for this season were Monday through Saturday following Thanksgiving and coincided with the two-week firearms closure in the piedmont deer season that was in effect at that time.

The scheduling of this fall turkey season in the piedmont was in response to a "boom" in the turkey population that occurred following restoration efforts that began in the 1950s. It was not uncommon to see flocks of over 100 turkeys in a wheat field or pasture and there were a small number of depredation complaints, particularly on wheat and cornfields. This "boom" in turkey numbers was a typical response that many wildlife species demonstrate when expanding into formerly unoccupied habitat. Characteristically, there are unlimited resources and the species typically exhibit very high reproduction and survival. That was the case with wild turkeys in the piedmont of South Carolina. However, this was a risky situation from a turkey disease and parasite management standpoint because extremely high local population densities increase the chance for local, as well as, widespread disease and parasite issues (blackhead disease was documented in the region). For this reason, the department scheduled a short 6-day either sex fall turkey season in the piedmont.

In order to have some control over this somewhat controversial season, the department relied on annual measures of turkey production and population numbers in the affected region to serve as a trigger for the fall either sex season. Results of the Summer Turkey Brood Survey were used to estimate reproduction and recruitment. The survey involves agency wildlife biologists, technicians and conservation officers, as well as many volunteers from other natural resource agencies and the general public. Recommendations based on population levels and recruitment were made to the DNR Board each September and the fall season was scheduled. Bear in mind that this process was extremely unwieldy as it relates to timing because the biological data needed to justify the fall season was not available until just prior to the time the fall season commenced. This presented problems from an administrative standpoint relative to promulgating regulations, public notification, and other details including distribution of turkey tags and regulations brochures.

Beginning in the late 1980s, turkey recruitment began to decline not only in the piedmont, but also throughout the state. By 1990, sightings of extraordinarily large flocks of turkeys were rare in the piedmont. During this same time period habitat changes occurred which apparently reduced the carrying capacity for turkeys in this region. These changes included widespread conversion of hardwood to pine, an emphasis on short rotation pine plantations, and more intensive site preparation techniques. Considering habitat and a measured decrease in turkey production it became apparent that the "boom" phenomenon in piedmont turkeys was over. Staff recommended discontinuing the fall season in 1991. No fall seasons have been scheduled since that time due to less than desirable measures of turkey recruitment across the state. Interestingly,

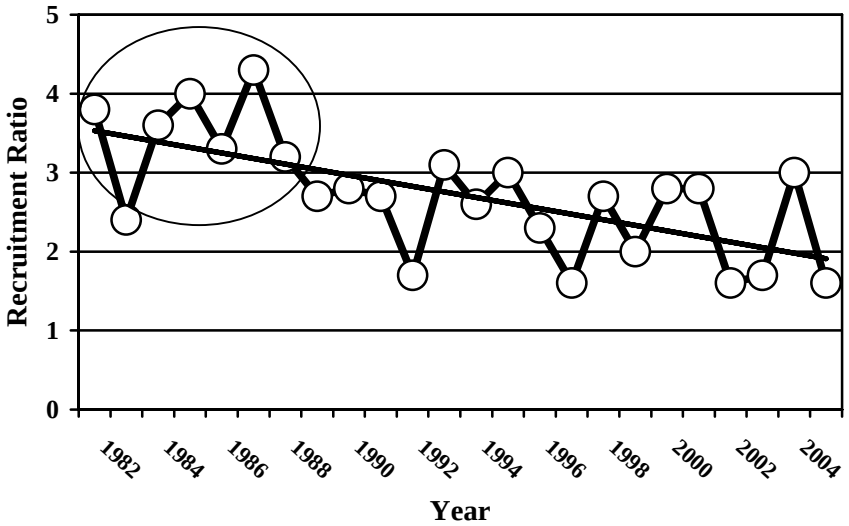
as declines in piedmont turkeys were noted, DNR was criticized by some, after the fact, for originally scheduling the fall either-sex turkey seasons in the 1980s.

Biological Issues

The primary mission of DNR is to do what is in the best interest of the resource based on the best scientific and biological information. Concurrently, DNR is interested in providing as much opportunity as possible for constituents to utilize wildlife resources within biological limits. The scheduling of the either sex fall turkey seasons in the piedmont during the 1980s is a good example of this strategy. Turkey populations had boomed in the piedmont, reproductive indicators were very high, and there was concern with potential/documented disease and parasite issues. In this case, increased opportunity was provided to constituents based on a biological need.

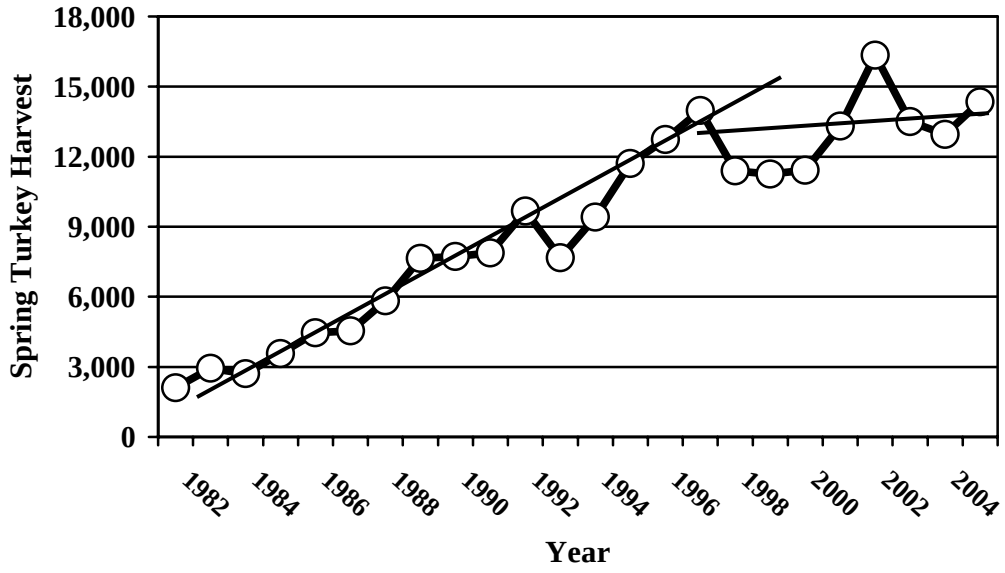
During the early 1980s turkey reproduction was at an all-time high and staff believed that an either sex fall season was in order (Figure 1). However, it is important to note that recruitment began to decline in the late 1980s and it has never been as high as it was during the early 1980s when the either sex fall season was in place in the piedmont. It can generally be stated that turkey recruitment has declined by about 30 percent over the last 20 years and there has been no prolonged period of outstanding recruitment comparable to that in the early 1980s (Figure 1).

Figure 1. Summer wild turkey recruitment ratio in South Carolina 1982-2005. Note the high level of recruitment prior to 1988 ($\bar{x}$ = 3.51) that supported the fall seasons in the piedmont. Also note that recruitment has declined over the last 20 years ($\bar{x}$ = 2.35) and that there has been no prolonged period of outstanding recruitment comparable to that in the early 1980s. Recruitment ratio is a measure of young entering the population based on the number of hens in the population.



Spring turkey harvest data indicates a similar situation (Figure 2). The spring turkey harvest in South Carolina increased virtually every year, in a near exponential manner, until the mid-1990s. As turkeys filled most of the available habitat in the state, reproduction, which had begun to decline earlier, continued to decline resulting in a stabilization of spring harvest figures after about 1997.

Figure 2. Spring wild turkey harvest in South Carolina 1982-2005. Note the dramatic increase in turkey harvest that accompanied expansion of the turkey population prior to 1997. Also note that the declines in reproduction depicted in Figure 1 resulted in a stabilization of spring turkey harvest figures by the late 1990s.



Hunting turkeys in the fall differs drastically from spring gobbler hunting, which is familiar to most hunters. Not only do hunting and calling techniques differ, turkeys in the fall are typically "flocked-up" and present different movement and social patterns. One major difference from spring hunting is the lack of gobbling by mature males and that mature males are less likely to respond to hunters' calling techniques than hens and juveniles. Due to these differences in turkey behavior and hunting techniques, states that offer fall seasons typically allow hunters to take hens or gobblers. Considering the decline of turkey recruitment over the long-term, there is concern over allowing hens to be killed because it will directly affect recruitment the following spring. This could rapidly depress turkey populations across the state. The stabilization of recent harvest figures coupled with a measured decrease in reproductive potential can be compared to financial planning when considering a fall season. With declining interest rates (turkey reproduction) the investment (turkey population) lacks growth and increasing the amount of withdrawals (fall season = increased harvest) will lead to a reduced total investment (turkey population).

Scheduling Issues

Declining reproductive indicators not withstanding, there are four other primary concerns related to scheduling a fall turkey season. These concerns relate to the incidental harvest of large numbers of turkeys by deer hunters, hunter safety, the presence of deer bait, and administrative timing.

First, the 6-day fall turkey season in the piedmont in the 1980s was scheduled during a closure in the deer season that occurred on public and private lands following Thanksgiving. This break in the deer season was never in place in the coastal plain and was eliminated in the piedmont in 1997. Therefore, there is no time period during the fall in which deer hunting is not allowed. Bear in mind that there are approximately 175,000 hunters licensed to hunt deer in South Carolina, a number that exceeds the current estimate of 120,000 turkeys statewide. There are only about 45,000 spring turkey hunters and the last year a fall turkey season was offered only 11,017 hunters received tags. Wildlife Section staff is concerned that scheduling a fall turkey season during the open season for deer would result in all deer hunters immediately becoming "fall turkey hunters". Deer hunters are already in the woods and if given the opportunity and a free set of turkey tags, it is likely that many would take one or more turkeys. In fact, most requests for a fall season do not come from traditional spring turkey hunters, but rather, the requests come from deer hunters who see turkeys while deer hunting and wonder why they cannot shoot a turkey.

Second, the majority of deer hunters hunt with weapons (rifles) that are illegal for turkey hunting in South Carolina. Many years ago, rifles were allowed during the spring gobbler season in South Carolina, however, following a tragic accident the SC General Assembly prohibited their use. Most states that have fall seasons do not allow turkey hunting with rifles. The National Wild Turkey Federation (NWTF) Technical Committee Task Force on Hunter Safety does not recommend the use of rifles for turkey hunting and national statistics indicate that when rifles are involved in a turkey hunting incident they are ten times more likely to cause a fatality. If a fall turkey season were scheduled during the deer season, the potential for accidents should be a concern because rifle deer hunters would be present even if it were "prohibited" to hunt fall turkeys with a rifle. Also, if a fall turkey season were held when the deer season was opened it would increase the probability of deer hunters killing turkeys illegally with rifles.

Third, hunting deer with bait is unrestricted in the 28 county coastal plain of the state and baiting deer is a practice that is not only common, it is the norm. It is unlawful to hunt turkeys with the use or aid of bait and hunters understand that deer bait must be removed prior to the spring turkey season. Killing turkeys indiscriminately and with bait was a primary cause for the decline in turkey numbers by the 1940s. Not only would the presence of deer bait during a fall turkey season be a dilemma from a law enforcement standpoint, to open a fall turkey season when deer baiting is ongoing and not expect turkeys to be shot over bait is simply not realistic.

Fourth, although DNR monitors turkey reproduction annually and could establish a reproductively based "trigger" for a fall season, this reproductive information is not available

until just prior to the time a fall turkey season would be underway. The Summer Turkey Brood Survey runs from July 1 to August 29. Since it requires 4 to 6 weeks for participants to return their surveys and for data entry and statistical analysis, the final report is not available until October. Therefore, the process of obtaining the biological data needed to justify a fall season presents clear problems from an administrative standpoint relative to promulgating regulations, public notification, and other details including distribution of turkey tags and regulations brochures.

Summary

Given declining turkey production that is evidenced by reproductive data, as well as, the recent stabilization of the spring turkey harvest, there is substantial concern with the prospect of a fall turkey season in South Carolina. Increasing harvest pressure on the turkey population, particularly by removing hens in the fall, could lead to a dramatic reduction in the statewide turkey population. Additionally, since there is no time during the fall when deer season is closed, there are concerns with the likelihood of a high incidental harvest of turkeys by deer hunters, hunter safety related to the use of rifles, and the dilemma over the presence of deer bait during the fall.

Finally, behind deer hunting, spring gobbler hunting is the second most popular hunting pursuit in the state. Staff believes that most inquiries related to a fall turkey season do not originate from turkey hunters, but from deer hunters who would like to kill a turkey while they deer hunt. Understanding the popularity of spring hunting, and the associated economic benefits to the state, there should be concern with compromising future spring hunting potential by scheduling a fall season that could significantly decrease the turkey population.

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